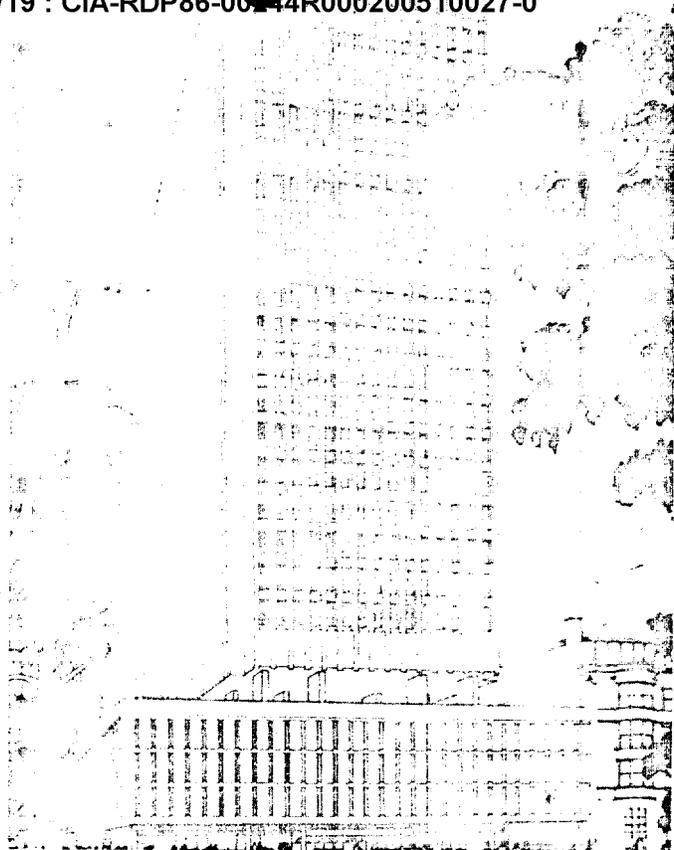


Construction Techniques

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**New Philadelphia office building is
nation's tallest, precast,
bearing-wall structure**

This spring, the Mutual Benefit Life Insurance Company will finish its new \$10-million headquarters building in Philadelphia. The 20-story tower, rising from a five-story garage base, will be the nation's tallest building involving the use of precast, load-bearing wall units. In addition to the 11-ton, white architectural wall units, the new structure also features a precast flooring system. Since the precast load-bearing wall units also serve as the facade, it eliminates the necessity of erecting a steel or concrete skeleton, then hiding it with a shell, as is done in conventional construction. With use of this method, it was possible to finish one floor, complete with walls, every five working days. Floor units are joined to the outside load-bearing wall units by steel rods and vertical dowels, and to a poured concrete core at the center of the building. The structure was designed by architects Eggers and Higgins of New York City, and Nowicki and Polillo of Philadelphia. The engineers are David Bloom Associates of Philadelphia, and Robert Rosenwasser Associates of New York City. The E. J. Frankel Construction Company, Philadelphia, is the general contractor. The Formigli Corp. is responsible for supply and erection of all precast, prestressed elements.



Survey of U. S. refuse collection practices

Refuse collection practices of 234 U. S. cities with populations over 10,000, and having combined population of 37 million, have been analyzed by Ralph Stone and Robert P. Stearns, of Ralph Stone and Company, Inc., Engineers, of Los Angeles. The work was supported by a Public Health Service grant.

Highlights of the findings include:

• Of the 5,918 units of collection equipment reported, 87 percent are rear-loading and 8.2 percent are side-loaders. Container and front-bucket units together account for 4.8 percent of the units.

• Equipment capacity averaged between 18 and 21 cu yd, with little variation reported by size of city, or by varying frequency of collection.

• Crew size is most commonly three men. In a sample of 136 cities, 54.4 percent use three-man crews, and 27.9 percent, two-man. Less than 3 percent use one-man crews exclusively, while an additional 5 1/2 percent used one-man crews as an adjunct to larger crew sizes. Crews of more than 3 men were used in significant numbers only when yard-carry-out service was provided by the city. Of 17 cities using four- or five-man crews, 9 provide yard service exclusively, and 2 use a combination of yard service, curbside or alley service.

• As to pick-up location, an analysis of 206 cities shows that 77 provide curbside

and alley pick-up, 42 collect at the curb exclusively, 33 provide carry-out service exclusively, 10 provide exclusive alley pick-up, and the remaining 44 provide combinations of these.

• Frequency of collection: Of 112 cities, 49.1 percent provide twice a week residential collection, 45.5 percent, once a week, and 5.4 percent, three times a week.

• Collection costs appear to vary by size of city. A sample of 166 cities reports a mean cost of \$17.66 per ton. But note the range by city size: \$9.50 for cities with fewer than 100,000 people, \$10.20 for cities in the 100,000 to 500,000 range, and \$24.05 for cities of 500,000 and over. The last figure, however, is distorted by the huge tonnages and high collection costs of one or two very large cities. To obtain a more representative figure, the median cost figure for the largest size city group was calculated: \$12.78. (The median cost figures for the two groups of smaller cities were very close to their mean figures.) Despite the closeness of the averages, cost figures may vary by 200 percent or more for individual cities, even for two cities of the same size, same state, similar economic conditions.

• Costs vary, depending on level of service: Of 39 cities reporting, the total average collection cost per ton was \$9.52

for curbside collection, and \$13.03, or 37 percent more, for cities providing yard collection.

More detail is available from Ralph Stone and Co., Inc., Engineers, 10954 Santa Monica Boulevard, Los Angeles, Calif. 90025.

**AISC opens 1969 prize
bridge competition**

Opening of its 1969 Prize Bridge Competition is announced by the American Institute of Steel Construction. This year's competition will be the 41st sponsored by the Institute, the national association for the structural steel fabricating industry. It is designed to encourage the creative use of structural steel in bridge construction and to recognize the nation's bridge designers, who make imaginative and esthetic use of steel.

Any steel bridge in the U. S. which was opened to traffic during the calendar year 1968, is eligible for entry. Stainless steel plaques will be affixed to the prize-winning structures, and certificates of award will be presented to the designer, general contractor, steel fabricator, and owner of each award-winning bridge.

Entries must be postmarked before August 15, 1968. The awarding will take place on June 12. Details are available from AISC, 101 Park Avenue, New York, N. Y. 10017.

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